

THE LEISURE HOUR

A FAMILY JOURNAL OF INSTRUCTION AND RECREATION.

No. 141.

THURSDAY, SEPTEMBER 7, 1854.

PRICE 1d.
STAMPED 2d.



EASTERN BARGAINERS.

A BARGAIN is a bargain in the east, and has been so from time immemorial. It is quite out of the question to buy a cabbage for dinner without going
No. 141, 1854.

through the regular formula and wasting ten minutes in useless colloquy; but when you come to regular trafficking—buying and selling wholesale goods—then indeed must the English merchant be endowed with great patience and a large

o o

stock of good humour, else he will never accomplish a sale or find a market for his goods.

My friend G. was a wealthy merchant, who transacted considerable business at Aleppo. He resided in a spacious house belonging to one of the khans or caravansaries. Up-stairs there was room enough for half a regiment of soldiers; downstairs, extensive warehouses and his office. G. was a most hospitable creature, and usually had his house full of travellers. One of this latter class was myself, and that on more than one occasion; but at present I shall confine my reminiscences to my first visit to Aleppo, when I was a stranger and uninitiated in the manners and customs of the people, besides being ignorant of their language.

My bed-room window looked into the great square, where at all seasons of the year were congregated itinerant merchants, bale goods, camels, and camel drivers; the merchants slept and ate in little wooden hutches which extended all round the square, and which were let out, with key and padlock complete, for a trifling weekly rent. One of these hutches was the fac-simile of all the rest; for in addition to the owner's box (which was supposed to contain fabulous sums of money, and opened and shut to an alarming jingling of bells) and bedding material, they consisted of four whitewashed sides, an elevated stone bench to serve as bedstead, a shelf or two, half a dozen wooden pegs, with long robes and turbans (curiously intermixed with strings of onions and garlic) pendent therefrom. A camp stool or two, a copy of the Koran, a few pipes, a narghile, a diminutive coffee kettle, a tray with six small finjans (cups), and a brazier with a charcoal fire in the centre; this completed the furniture of the room, with the addition perhaps of the merchant's travelling saddles and boots, neither of which, in my humble opinion, could be reckoned as ornaments.

At all seasons of the year the brazier was alight: in summer it answered for supplying fire to cook coffee with, or for the perpetual demand of smokers; while in winter it imparted heat in addition to answering the above purposes. No prince or potentate luxuriated more in palaces, or reposed better on eider down, than did these merchants live and sleep in these said hutches.

Being an early riser, I was usually looking into the square from the lofty and capacious terrace of G.'s house long before the rest of the city was astir. At that hour, the pureness of the morning air was untainted with the peculiar oriental smell of the bazaars, which I abominate, and there was something indescribably lovely in the serene tranquillity of the hour of dawn, myriads of larks balancing themselves and shaking the pearly dew-drops from their wings to the sweetest and most cheering of songs. All this was nice, sentimental, pure, and fresh, after the every-day bustle and fatigue of a hot and mercantile city and a clamorous and bustling people; so, as I have already said, I climbed up to the top of the terrace before others, and watched proceedings as the city gradually awoke to the turmoil of life. One by one the locked doors of the various hutches would swing heavily upon their hinges, and the half-asleep occupants stumble out into the glare of day.

"Sabah il keir, (the top of the morning to you.)

May the delights of the pure morning breeze encircle your brow." With such and like salutations they would stalk to the fountain in the centre of the square, and there go through their morning's ablutions, with what Dr. Johnson used to term "oriental scrupulosity."

"I hope your excellency has reposed on the pillow of innocence and happiness, and that your dreams have been visions of Paradise," etc. "The same to you, sir." With such flowers of eloquence mutual greetings are exchanged, while the ablutions are being performed, and then the barber and his assistant make their appearance. Heads and beards and chins are shaven as smooth as the pavement, seated on which these itinerant merchants go through their toilet. As a matter of course, the barber is full of important intelligence and news, else would he disgrace the fame of his ancestors.

"Well, Hadji Mahomed," exclaims a corpulent trafficker from Baghdad, "what news from the seashore, and what in the city?"

"Stout tidings," replies the loquacious barber, seizing the merchant by the top-knot on his head, the only spot where the hair is permitted to grow, and flourishing his razor in the other hand. "Stout news for trafficking gentlemen like you; six failures in the city, and all the bankrupts' effects to be brought to the hammer immediately—many vessels arrived at the sea-port town full of manufactured goods from all parts of Europe—the price of imports falling rapidly—the value of export goods rising in proportion."

Such news is of course highly acceptable, and delights his auditors, who add an extra para or so to his usual fare. Their commercial transactions consist chiefly in bartering the produce of the interior for bale goods imported; and though from long experience they are all well aware that such items of news are largely fabricated by the barber himself, to suit the class of listeners, they like them, for the love of gain is innate in them, and money, even in imaginary speculations, is soothing to their avaricious breasts: they are, in short, very fond of building castles in the air.

The barber straps his razor and takes his leave: a small boy, servant of all work, makes the coffee and fills and lights the pipes. By this time the merchants have ensconced themselves in their long loose attire, adjusted their turbans, and performed their morning orisons. The camel drivers and muleteers have loosed their beasts of burthen from the various iron rivets to which they were tethered during the night, and driven them away for pasturage to the outskirts of the city. Town scavengers now make their appearance, and sweeping up the square, they carry away the offal to be sold to the proprietors of the various gardens in the environs. Then comes the water carrier, and sprinkles the place from his huge leathern sack, by which time the city has awakened to its every-day noise and labour, and business transactions are commenced.

Every square in Aleppo, at all seasons of the year, has piles upon piles of merchandise exposed to the open air; by means of tarpaulins these are effectually protected from any inclemency of weather, and they are excluded from the warehouses, either because there is no room for them

inside, or else because they have only just arrived, or have only just been sold and are about to be sent away. From one of the above causes, there they lie, and being there they afford capital temporary seats and very good substitutes for tables.

Seated on these, the occupants of the hutches already alluded to discuss their pipes and coffee, besides a vast deal of mercantile conversation, for their only theme and topic of conversation is money and merchandise; neither do they make any secret of disclosing to each other the results of their private monetary transactions. They have travelled long together, coming and going by the same caravans, enduring in company, and with praiseworthy good humour, all the hardships encountered in a dreary desert journey.

Hadji Ali, the proprietor of the goat's wool from Bussorah, tells how he spent six hundred piastres twenty years since, during his annual visit to Aleppo, and after remaining there nearly two months, at last sold his wool to the proprietor of a straw hat for nearly twenty times its original cost. Laughs and encomiums greet the old usurer on all sides, till the Baghdad merchant, who is even an older stager than himself, abruptly terminates the Hadji's cachinnations by alluding mysteriously to the great year of the zinzali (the earthquake), when, as report goes, Hadji lost ten thousand piastres, besides ever so many camels and mules and donkeys. A sharp-looking little man from Diabekir recounts his exploits, which savour marvellously of swindling; but he is held up as a pattern of mercantile cunning, being skilled in oriental quirks and quibbles. An old Turk, with a grey-bearded son, both of whom have travelled from distant Mosâl, listens to the last narrator with special interest, and impresses on his son the propriety of imitating him.

Suddenly the noisy clamour of conversation is hushed into a whisper. Two sleek-looking individuals, head brokers of the city, stalk into the square. There is cunning in the eyes of both of them, and large parcels of patterns protrude from under their arms. Pipes and coffee are served around; the two sedate functionaries seat themselves on the largest Manchester bale in the square, and using another for a showboard, they open out the pattern books to their full extent, and the eyes of all lookers-on are dazzled with the gorgeous display of colours. White, black, blue, green, yellow, brown, pink, crimson, drab, with all intermediate shades, and every hue and tint of the rainbow, are developed in the small atoms of samples so skilfully and tastily arranged by the wary Manchester merchant, and so elegantly bound in a purple morocco pocket-book.

The appearance of these samples is a signal for general action; pipes are laid aside for a minute, and the business of the day commences in right down earnest. The various merchants that constitute what is termed the Baghdad caravan, but which includes traders from all parts of Mesopotamia, congregate like eager schoolboys round the two brokers, and the books of patterns are passed from hand to hand, each one carefully noting the texture of that particular sample upon which he has set his choice, though careful to conceal his selection from the hawk-like eyes of the two brokers. Any symptoms of anxiety for any particular

object would in their estimation ruin the speculation, and mar the pleasure of bargaining.

At last the patterns are returned to their former position; the merchants range themselves in regular order in front of the brokers, forming a rather extensive semicircle, and the boldest and most inured bargainer breaks the ice.

"How much of that blue cloth have you got, yah howajah delali? (delali is Arabic for broker); and how much do you ask for it the bale?"

The broker here interrogated, calls to the nearest coffee-house keeper to serve the guests round with coffee and narghiles at his own expense, and this order being speedily executed, the merchant returns to his charge.

"How much of that blue cloth, and at what rate per bale?"

"Now what is the use," mildly remonstrates the broker, "of your asking that question? You know as well as I do that you never intend buying one inch of the blue cloth in question. Here, this is what you want."

Hereupon, a sample of some gaudily coloured handkerchief stuff is held up to public gaze, and a laugh is raised at the discomfited merchant's expense.

Not one whit less deceitful than the delal, is the trader; he earnestly protests that the blue cloth is what he requires; the broker expostulates; the merchant grows wroth; the broker disclaims; the merchant screams; the two brokers roar out at the topmost pitch of their lungs; whereupon the whole posse of traders join in the uproar. Uninitiated strangers, and frightened females and children, rush to the windows of the various houses in the khan, whilst one old lady, in a cracked voice, asks whether the Arabs have invaded the city. A loud burst of laughter greets this inquiry; good humour and quiet are restored to the bargaining lot, and the farce is acted over again a second time.

It would be useless to recapitulate how often the caffegge replenishes the pipes and the coffee—how often the same questions are asked and answers evaded—how often timid people implore information relative to the horrible deed they presume to be transacting—how often the angry storm of voices swell upon the air, and then speedily subside into hilarity and peace. Suffice it to say, that full three hours are sometimes thus exhausted in vain and noisy strife, during which interval there is clamour sufficient to give rise to any misgivings relative to invasion or civil discord.

At last, both parties grow weary of this child's play; the man that asks for the blue cloth acknowledges a weakness for the gaily-coloured handkerchiefs; each man ultimately singles out his pattern; the quantity is disclosed, and the names of the various merchants whose effects they are; but the price? that is still kept a secret, for only the first act of the comedy of bargaining in the east is now brought to a close. There is much, very much, yet to be accomplished, before John Snooks can inform his correspondents at home that he has advantageously disposed of a lot of "grey domestics." Start not, reader; we speak not of old slaves in quoting the above harmless phrase, for the grey domestics in question are only a certain quality of cloth, well known in Manchester trade circulars.

The two brokers having given the names of the

various merchants who have the chosen goods for disposal, take their leave and retire from the field of controversy. Their part is accomplished. So, introducing the brokers of each respective merchant of Aleppo to the Baghdad caravan, the two head delals withdraw to another portion of the city, or to acquaint the several merchants with what they have accomplished.

Every European merchant in Aleppo has a salaried broker, whose business it is to buy and sell for the firm, for the consideration of a certain stipulated per centage. To one of these, some half-a-dozen Baghdad traders are now handed over, and, preceding them with all the pomp and dignity of office, he introduces them into the counting-house of my friend, premising, as a matter of course, and with little regard for truth, that these gentlemen had travelled some two thousand miles, merely to shumil howai, that is, to smell the wind; or, in English vernacular, for change of air.

G., who is well accustomed to the art of bargaining, immediately invites the strangers up-stairs to his private sitting-room, whence, in the course of half an hour, proceed angry voices, loud and violent withal, and strangely at variance with the etiquette of simple visits of formality. The cause of this, however, is speedily disclosed. The broker has no sooner introduced his friends into the merchant's sitting-room, and supplied them with pipes and coffee, than he carefully looks under the divan and into the recesses, to make sure that no eaves-dropper is there concealed; being satisfied on this score, he bolts the door. A stranger would be alarmed at such proceedings, and reckon on high treason as amongst the least disclosure that the broker is about to make. G., however, smiles pleasantly the while, and discourses with the strangers about everything but what most concerns their visit.

"Sir," says the broker, in a species of dramatic whisper, "I have brought you these gentlemen to settle about a couple of shiploads of Manchester bale goods."

"Very good, Jacob; you know the terms," is the merchant's ready reply; and thereat the assembled traders violently protest.

G. is a perfect Arabic scholar, and skilled in the flowers of eastern rhetoric; a few well-timed compliments restore good humour, and the broker, seating himself between his master and the Baghdad merchants, commences business by demanding just three times the price he means to take for the goods.

Hereupon the spokesman of the trading party takes upon himself the reply. The goods are not of the best quality. Money is generally scarce; but as they only come once a year to Aleppo, and as friend G. is a real chelibe—a perfect gentleman—he and his friends don't mind making a sacrifice for once, and so he tenders on behalf of himself and his friends—say a hundred pounds for the value of a thousand.

At this generous proposition the merchant rubs his hands and laughs aloud, whilst the broker pretends to be dumb with surprise at their impudence. The merchant's conduct aggravates the traders; so, by way of bringing matters to a speedier close, they cut off twenty per cent. from their original paltry offer.

Hereupon the broker dances up and down the room in excitement—unbolts the door—orders more pipes and coffee, pulls at the hairs of his beard, and exclaims violently against the want of principle amongst the Baghdad caravan in general.

Well, the traders pretend to be careless about the matter, and would rather let it drop at once; so they produce samples of the gall-nuts and wool that they have for sale, asking for the same fabulous prices.

G. looks at them, secretly approving of their quality, but chucking them to the other end of the room, as though unworthy of attention. A greater clamour than ever now ensues, and the English merchant's red face declares that he himself is not free from the general excitement. Fresh propositions are made and indignantly refused; the hour grows late, the combatants hungry, and both parties are not one inch advanced towards accomplishing the ends in view.

The conversation commenced with frivolous remarks about the weather, and it ends with the same. The merchants and the broker retire for the day, accompanied to the door by G., who takes an affectionate leave of the strangers, wishing them a pleasant journey back to Baghdad.

Next day, punctual to the hour of business, the broker and the traders present themselves at the merchant's door. This time the number is augmented by one or two additional natives, who are to act as go-betweens. The formalities of yesterday are dispensed with at once, and the business of the visit engrosses conversation. The second day terminates more stormily than the first, though considerable concessions have been made on both sides. Suddenly a scuffling noise is heard on the steps; the traders rush down, and out into the square, leaving their cloaks in the hands of the broker, and declaiming loudly against the said broker and all the European merchants in the universe. The broker and the go-betweens follow them, deprecating their violence; all the idlers hanging about the khan take sides in the wrangling that ensues, and tumult once again rends the air.

The merchant comes down-stairs whistling, and, mounting his horse, gallops off to the cool environs of the city. Casual spectators proclaim the bargain broken off, and suppose the traders and the merchant to have declared open war. The broker and the merchant know to the contrary, but they keep their own counsel. So the members of the Baghdad caravan sup sumptuously on pillow, and go to bed early, thus to be prepared against the emergency of the morrow's struggle.

The third day arrives. The bargain is again closeted in the merchant's sitting-room; occasional blustering noises proclaim the strife still raging within; but these gradually subside in fierceness as the day draws to a close. Four o'clock strikes, and the muezzin cry summons the faithful to prayer. The door of the sitting-room is suddenly flung open down-stairs, and into the open square rush all the disputants. The broker seizes G. by his right hand and drags him, apparently unwillingly, towards the chief of the Baghdad caravan; this old Turk, seemingly as reluctantly, yields his right hand to the clutches of the eager broker. To join these two palms together is now the broker's endeavour, and valiantly

he exerts himself to accomplish this feat of strength, repeating the while loudly, and for the benefit of all within hearing, the terms of the compact. Meanwhile, the merchant and the trader struggle violently to get free. Rapid concessions, however, are being made on both sides, and the broker's arms are nearly wrenched from their sockets.

At last, by a valorous effort, both hands are brought together; both parties accede to the terms; the palms of the hands are slapped together in the presence of all parties, and *the bargain is struck*. The merchant has sold a thousand pounds' worth of merchandise; the trader disposed of all he had to sell, and nearly all his ready money.

Next day the broker pockets his fee—the go-betweens get their bucksheesh—the camels of the caravan are loaded, and the Baghdad merchants take their departure; while John Snooks writes to his correspondents to tell them how much he has netted by the bargain.

A MONDAY AT THE CRYSTAL PALACE.

WHEN multitudes meet together in the pursuit of innocent pleasure, and every face beams with an expression of delight, he must be but a sorry philosopher who does not catch something of the general spirit. To be proof against the contagion of cheerfulness and good-humour is no proof of wisdom, but of something the reverse of that; and it is to be desired for all of us, that such a condition of impassibility should be, and continue to be, as remote from each of us as any of the hateful epidemics for the cure of which we have recourse to the doctor.

A capacity for simple enjoyment, like other capacities, can only be maintained by occasional exercise. That, to a great extent, it has died out among our toiling masses, and been superseded by a capacity for, and an addiction to, a species of enjoyment of a different character, is a fact which, while it cannot be denied, may be accounted for in great part by the absence of simple enjoyments amongst us. Society has lost much in losing its innocent pleasures and the relish for them; latterly we have grown aware of the loss, and been anxious to supply it. To this general feeling, as much as to anything, may be attributed the interest with which all ranks and classes regard the People's Palace, and the universal wish entertained for its prosperity, which all parties and persuasions are ready to promote by the carrying out of their own favourite measures of management. With these we have nothing to do; but we would like to see the people enjoy themselves in a reasonable way, and have a predilection for happy faces; and therefore it was with a determination to participate in the general pleasure, that the other morning we started for Sydenham to spend the day with the Monday frequenters of the palace.

We begin our holiday by mounting to the top of an omnibus, and rattling over the stones, London Bridge-ward. The thermometer stands at eighty in the shade, and we are tolerably well baked by the time we descend at the railway station. We are glad of the shelter and the shade, and stand aside while the eager troops who are

bound on the same errand as ourselves, are crushing at the wickets for tickets, and defer our claim till a few hundreds of others are satisfied. A couple of shillings pay for a blue ticket, which franks us in a second-class carriage to the palace, and brings us home in the evening, or as much earlier as we please. We find, when seated in the carriage, that eightpence would have done the business just as well, seeing that Mr. Welt, the shoemaker, and his two daughters, who are evidently servants out on a holiday, have got pink tickets, for which they have paid that sum, and are packed by the platform-man in the same carriage. The three Welts are joint proprietors in a bag of black currants, and help themselves from it, after the eastern fashion, with their fingers: the bag has suffered collapse by the elder girl sitting upon it, and, in consequence, the knuckles of the triumvirate are disagreeably suggestive of a cannibal feast, dripping deep red gouts.

A slow ride, enduring for the best part of an hour, brings us to the palace platform, whence a series of long flights of steps, and longer galleries, lie between us and the nave of the building. As we explore this route, we are struck with the multitudinous evidences of the thirsty state of the weather, which assail both the eye and the ear on all sides. Bottled ale and stout seem to be the only things in demand—the explosion of corks being so continuous and rapid, as to remind us of the running fire of musketry at a review. Turning into a chamber marked "Refreshment Room," we are borne forward by the impetus of a storming party, who, armed some of them with empty pewter pots, are doing battle for more beer, which a couple of brawny fellows, stripped to their shirt-sleeves, are pumping incessantly without a moment's pause—distilling streams of perspiration the while. Within the immediate influence of these fast-flowing fountains, a certain order of complexions, the characteristics of which it is impossible to mistake, have cast anchor, and taken up what appears to be intended for a permanent position; and it seems very doubtful whether some of them, who have been sitting here since the arrival of the first morning train, will succeed in finding their way further into the building.

With some difficulty we make our way out of this ill-conditioned vestibule, to an antechamber more accordant with our notions of propriety, where, in the presence of transparencies from Raphael, and tapestry from the Cartoons, more temperate libations are going forward. Thence we come upon a regiment of luncheoners seated at long tables, and manifesting, some of them, marvellous capabilities in the cold-collation service; fowls fly away without wings, and hams walk off with an agility they never manifested when they were only legs. Suddenly, and almost before we are aware, we find ourselves contemplating a group of savages, all but alive, from the South American continent, and then we are starting away from a wild-cat who seems about to spring upon us. We are in the Natural History and Ethnological Department, and cannot sufficiently admire the elaborate pains which have been taken to render the quasi-living groups here assembled, whether of the human or other animated nature, perfect and striking. The perfection of these forms, in fact, leaves

nothing to be desired, so far as the design is yet carried out; and when the whole is completed, this department will constitute a spectacle unique in itself, entirely novel, and possessing a value for the practical purposes of study and illustration, to which there is nothing else in existence, in this country at least, that can prefer a similar claim. The animals and birds are stuffed with consummate skill, and the human figures are modelled with remarkable fidelity. The best evidence of the success which has crowned the efforts of the artist in this department is found in the unqualified admiration and interest his labours excite among the spectators.

We stroll onwards through the nave; looking into the different courts, observing that in each and all of them the guide-books are very much in requisition, and the visitors are consulting them for the satisfaction of listening groups; looking also into the portrait galleries, where we search in vain for celebrities who ought to be there, and puzzle our biographical memories to account for some who, we are disposed think, might as well be absent. A strange *mélange* of sounds attracts us to the Musical Instrument Court, where we are favoured with a conglomeration of simultaneous performances by amateur professionals, to whom the key-boards of a score of open pianofortes offer a temptation which they cannot withstand. Hence ten pair of hands, or so, are rattling away together, and fragments of tunes, both lively and grave, make up a concert much more varied than harmonious.

The Industrial Courts remind us of the Hyde Park Exhibition; but the abundance, the luxurious plethora of material wealth, which characterized that extraordinary gathering, are as yet but feebly represented in the People's Palace. Perhaps it is not desirable to introduce more of this element than is necessary as means of instruction; and it is to be feared that the appropriation of too large a portion of the area to mere purposes of trade, while it will have a tendency to lower the character of the establishment, may not result very largely to the profit of the traders.

The most pleasing features of the promenade in the interior, independent of the courts, with their marvellous contents, are the foreign plants and shrubs, and the exquisite flowers, and the profusion of both, contrasted with the snowy statuary which occupies, or will occupy, every available site. The predominance of undraped figures, however, is, we think, an outrage against correct taste and that old-fashioned English feeling which we should be sorry to banish from the land. We are quite aware that a figure may be draped to the chin, and yet be grossly immodest; but we strongly reprobate the practice of exhibiting in mixed companies any figure calculated to call a blush to the cheek of innocence and youth. This is a point on which, we trust, public opinion will be made to bear upon the directors of this undertaking, and secure some change.

It is oppressively hot, and the absence of water in the fountains suggests the idea that it has all been dried up by the fierce heat of the sun. We make instinctively for the open corridor abutting on the park, and inhale the refreshing breeze that blows from without. The panoramic landscape

which lies beneath is to-day clearly visible in all the glory of summer, and the eye roams with delight over the rural expanse rich in serried foliage, and dotted at intervals with the habitations of man. The park itself, however, the foreground of the picture, is very much a wilderness as yet, not without its spots of quiet beauty, but bare and upturned, with a world of work yet to be done, ere the promise of the plans and the pictures with which every eye is familiar can be fulfilled. Beds of exquisite flowers and shapeless heaps of earth diversify the scene. There is a sad want of shady shelter from the heat, the trees being all too few and of insignificant size. Their black shadows thrown upon the grass tempt the visitors to recline at length upon them to escape the intolerable heat; but this indulgence is looked upon as a species of treason, and all who offend by sitting or lying on the grass are immediately hunted up and driven back upon the red-hot gravel, by a very active brigade maintained for the purpose. The authorised "Guide to the Palace and Park" represents, in its illustrations, certain Arcadian scenes, with figures grouped upon the sward beneath the trees. It may be as well for the public to know that if they expect to partake of any luxuries of that kind, they will be disappointed—that the conservation of the grass is regarded by the keepers as of more importance than the enjoyment, dear to a Londoner, to be derived by using it as a carpet.

Having been guilty of this unconscious offence, and routed up by a policeman, we return for shelter to the building; but in our way encounter a party of bacchanals, evidently experienced disciples of sir John Barleycorn, who, having taken possession of a shady spot on the grass, and seated themselves upon it at least fifty strong, including both sexes, bid defiance to the efforts of the grass-wardens to move them off. They have fortified their position with pots of beer, and to all the representations of the men in office reply with that species of low wit known among their class under the denomination of "chaff," and by uproarious bursts of song of no very modest kind, in which the whole party join in occasional chorus. Off the grass they are determined, one and all, not to go; and considering the overwhelming heat that prevails even in the shade, one cannot much marvel at their determination to avoid the sunshine. What we may marvel at, however, is the presence of the pots of beer in such quantities, and the manifest effects which its diffusion has already produced upon the major part of them. It is but charitable to suppose that the overpowering heat of the weather, coupled with the fact that the numerous fountains of the Crystal Palace as yet only exist upon paper, and that not a drop of drinkable water is apparently obtainable, may be the occasion of much of this excess—to which we feel bound to draw attention, ere reiterated precedents give the force of custom to intemperance.

On ascending again towards the upper terrace, our ears are greeted with the welcome sound of music exquisitely warbled forth. We are met by a crowd of people, each armed with a rush-bottomed chair, who are running to secure an eligible position for listening to the performance of the band. The performers have located themselves in front of the centre transept, and in a few minutes

are surrounded by thousands of delighted listeners, who, crowding the broad flights of steps, and thronging the galleries of the building, lend their willing ears. The music is of a sterling character and capably performed, and though entirely the product of wind instruments, has an effect more approximating to the orchestral than we could have imagined producible by such means alone. Now is the season of special enjoyment; the noble strain swells and sinks and swells again, now rising to a martial climax with the crash of drum and cymbal, now dying softly away like the breath of the night-wind among the whispering sedge. We wander half unconsciously back again into the garden of the nave, among the pendent flowers and recumbent shapes of beauty; into the portraiture galleries that flank the courts; into the courts themselves, where yet a few belated artists are at work completing their prolonged labours; into the departments where, in the charge of solitary custodians, goods for sale are displayed—books, cutlery, prints, photographs, stationery, perfumery, etc. etc., but where trade appears to be taking a siesta, lulled to repose by the dulcet strains of the distant band.

Towards evening the music ceases, and we note that the company has thinned considerably since noon-day, the genteeler portion having withdrawn by the early returning trains. We are also under an obligation to return home before sunset, and resolve to follow their example forthwith. In this intention we are unfortunately defeated in a manner anything but agreeable to our *amour-propre*. Directing our steps towards the railway entrance, we have necessarily to pass the "Refreshment Room," where the only fountains, those of beer, which the Company have yet been able to get into working order, have been working hard enough all day. We enter, for the sake of reconnoitring, and struggling past the pumps, to the end of the room, find our conjecture of the morning borne out by fact, as far at least as we are able to judge; a few of the same flabby faces, lack-lustre eyes, and bibulous throattles yet remaining at their libations, and impressing us with the notion that they had never stirred from the spot.

Escaping from this unsightly throng, we descend the galleries towards the train, thinking of the tea-table at home, and anticipating its enjoyments. In a few minutes we find ourselves caught in a kind of trap in the centre of a dense crowd. We cannot advance, because the way forward is barred by a closed door in charge of policemen; we cannot recede, because the crowd behind is pushing us forward and increasing every moment. There is nothing for it but patience; and patience with the fooleries of some hundreds of noisy fellows made unusually boisterous by beer is not the easiest of the practical virtues. The women shriek and squall, and not a few of them jump from the low windows at the side into the garden, to escape the rude civilities of sir John Barleycorn's disciples. By and by we move on for a short distance, and then there is another stoppage of another quarter of an hour—then another move on, and we are admitted into another trap; from this, in about twenty minutes more, we are also allowed to escape, and we emerge upon the railway platform. Upon looking at our watch, we find

that it has taken us the best part of an hour to get from the nave of the palace to a seat in the train, and we cannot refrain from expressing our disapproval of the arrangements which have subjected us to such an *experimentum crucis*, the dread of which will deter us from any very speedy repetition of a visit to the palace by railway.

During the ride home we are regaled with a narrative of the exploits of a visitor who had signalized himself in the course of the day by smuggling into the grounds, where, it would seem, drinking is nominally forbidden, numberless pots of beer. He is loud in his explanations of the manner in which he did it; but not being particularly lucid, owing probably to his participation in the fruits of his triumphs, we are unable to fathom the mystery of his proceedings.

We leave Sydenham behind us with reflections not all of a pleasant kind. If in many respects we have been delighted beyond expectation, we have also been disappointed, because annoyed beyond expectation, by seeing the effects produced by intoxicating beverages upon those classes whom the undertaking professed to be intended to elevate.

We look forward, therefore, to the future of the Crystal Palace with some degree of anxiety. If rendered more popular in its character (for there is too much of what is merely adapted for artistic tastes in the various courts); if weeded of its objectionable statuary; if divested of all alliance with intemperance; and, above all, if opened on the Saturday afternoon, so as to meet the popular movement for the half holiday, and give confidence that all intention of opening it on the Lord's day is abandoned; if these conditions, we say, be observed, then the undertaking, we trust, will prosper, and become, like its predecessor in Hyde Park, a place of innocent amusement and improving study. If it is to remain as it is, however, we are not without grave apprehensions that it may eventually degenerate into a monster Vauxhall or Cremorne.

Such are our impressions on a Monday's visit. Another day we may take an opportunity of describing some of the curiosities with which it abounds, having a sincere desire, notwithstanding the above remarks, that the undertaking should prosper and be made a source of healthful recreation and improvement to all classes of society.

RECOLLECTIONS OF ESPARTÉRO.

It fell to my lot to pass several years in Spain when that fine but still distracted country was scourged by civil war. I was so fortunate as to be present at the head-quarters of the gallant Spanish general-in-chief, Espartéro, duke de la Victoria, upon whom the eye of Europe was then intensely fixed, as he played, warily but successfully, the eventful game of war with the powerful faction combating under the standard of Don Carlos, the pretender to the Spanish throne. As he has again been summoned to extricate the nation from its difficulties, my personal recollections of him may now be read with a deepened interest.

It was early in the morning of the 31st of August, 1839, a lovely morning, that the duke de la Victoria—for such is Espartéro's title—and the



ESPARTERO.

Carlist general-in-chief, Maroto, rode side by side out of the pretty town of Bergara, accompanied by some superior officers of the duke's staff, and two English officers, of whom the writer had the honour to be one. The occasion was an interesting one. After a severe and protracted contest a convention had been signed between Espartero and the Carlist general-in-chief, Maroto, at the town of Bergara, in Guipuzeva. Its conditions were favourable for the queen's cause, and generous towards the vanquished. The Carlist troops agreed to lay down their arms, and it was to that spectacle that we were now advancing.

All nature seemed decked in a holiday garb to welcome the advent of peace. Soft breezes, redolent of the aromatic herbs with which the neighbouring mountains and hills were carpeted, fanned our sun-burnt faces; the birds blithely carolled in the trees, whose rich foliage, gently agitated by the whispering air, seemed to bow a graceful wel-

come to the harbingers of peace; a purling stream by the road-side harmoniously responded to the rustling of the leaves; whilst our horses, as though conscious of the beauteous mission on which they were bearing us, pranced and curveted in an unwonted manner, responding with arched neck, and tossing mane, and pricked-up ears, to our caresses and affectionate encouragements. They had steadily and faithfully carried us through many a long and weary march, safely picking their way in the black night, over mountain paths, near the deep morass, and across the dangerous ford. Gallantly had they obeyed the rein, in the midst of the hot fight and in the perilous defile; and now, part and parcel of ourselves, as it were, they seemed to rejoice in the approaching festival.

At a turn in the road we came in sight of the expectant military masses. On either side was posted a brilliant division of the queen of Spain's army—cavalry, infantry, and artillery. Close to the road,

on a rising ground, was a most picturesque group, composed of Carlist generals and field officers, well mounted, and wearing *zamarros*, or black sheep-skin spencers, and Basque caps, called *boynas*, some red, others blue, and others white, with gold or silver bullion tassels. They were hardy and soldier-like in appearance and demeanour. Opposite the queen's troops were two divisions of the Carlist army. The officers and men, principally natives of the Basque Provinces and Navarre, all wore *boynas*; their military appointments were good, and they were evidently well disciplined. Many groups of women, and old men, and young children, hovered about the ranks, with pleased yet anxious looks—*still* anxious, for they could hardly believe that these good appearances would not be marred by some untoward circumstance.

The moment the duke de la Victoria and the Carlist general, Maroto, appeared, the fine military bands of the queen of Spain's regiments, and the drums and bugles of the Carlist battalions struck up; the men fell into line with pleased alacrity; and there, opposite to and within a few yards of each other, stood those bronzed, hardy soldiers, who for years had been seeking each other out, firing at one another, and practising all the daring and stratagem of deadly war! There they were assembled, with gentle and willing hearts, to give each other the embrace of peace!

In front of every battalion, Espartéro harangued the Carlists; happily alluding to their beautiful country, their simple habits, their valour, their industry, the privations they had undergone, their rapidly approaching return to their long-ing families, their rural sports and dances, in which, he said, he had cheerily joined in his youth, and concluding by riding up in front of the Carlist line, and after scanning it with his fine, keen eye, giving the word of command in a powerful voice—the word of command to the Carlist troops! This command was to "stand at ease." It was obeyed with true military precision. The clap of the soldiers' hands crossed over the half-recumbent muskets was electrical; it was the triumphant acclaim of peace!

The duke then said:—"Now, my men, pile your arms, and go and embrace my soldiers, no longer your enemies, but your loving friends."

In a minute the soldiers of the two heretofore hostile armies were mingled together in sincere fraternity. Many noble traits were displayed on both sides at this moment of heartfelt reconciliation, and during the period which immediately succeeded it. After this affecting scene, the two generals returned to Bergara amidst universal *vivas* from the troops. They were also hailed by the inhabitants with the liveliest demonstrations of delight, and all was gay and happy.

Having accompanied the duke to his quarters, I rode out again to the spot where such a touching scene had just been enacted. I conversed with the Carlist officers grouped with those of the queen, who were all old and valued friends and comrades of mine. We spoke of different scenes and actions in which the two armies had been engaged; many curious anecdotes were related on both sides, and all was a source of manly congratulation on the termination of so unnatural a warfare.

In other parts were Carlist soldiers in affec-

tionate converse with members of their families, who had come from considerable distances to witness this glorious pacification, and to return, accompanied by their long-absent relatives, to their farms and cottages. Young girls, too, were there, seeking for their lovers, brothers, or other kinsfolk, and bringing fruit and other rural delicacies to refresh and regale them. Old and young, high and low, all were animated by the blessed spirit of peace; and, as the evening at length closed in, there were to be heard in the mingled encampment the sweet melodies of Guipuzeva, Alava, Biscay, and Navarre, succeeded by, or blended with, the not less thrilling airs of Aragon, Castille, Andalusia, and all the provinces from which the Spanish army drew its soldiers.

Espartéro was next called upon to display his loyalty and patriotism on a new and unlooked-for field. Political events occurred which ended in the departure of the queen-mother from Spain, notwithstanding Espartéro's entreaties that she would not take so rash a step, and in his being elected by the representatives of the nation, in Cortes assembled, sole regent of Spain. In that elevated post he was distinguished by a strict adherence to the constitution, by the care he took of the youthful queen and her sister the infanta, whom he surrounded by virtuous and talented preceptors and an exemplary court, as well as by the simplicity of his own demeanour.

But the army, chiefly composed of raw recruits, was corrupted by faithless officers, acting in concert with base political agents of the queen-mother; and after a series of military revolts, which were put down by the courage and energy of the regent, the troops which he placed himself at the head of fell off from him by degrees, and he barely saved his own life and the lives of a few faithful followers, including his ministers and some generals and other military officers, by embarking in the Bay of Cadiz on board the English line-of-battle ship *Malabar*, and coming to England.

Don Baldoméro Espartéro duke de la Victoria was in his fifty-first year when he arrived in this country, in the month of June, 1843; consequently, he is now in his sixty-second year. He is of middle height, and well made; his complexion is dark, and his countenance thoughtful and expressive. As a military officer, he is master of his profession; as a statesman, he stands almost alone in Spain for that straightforwardness which is of infinitely more value than the tortuosity of an astute diplomatist. He is an accomplished gentleman, a sincere friend, and, above all, an honest man. On his arrival in London, great numbers of the nobility and gentry, as well as military officers of high rank, called at his hôtel (*Mivart's*) and inscribed their names in his visitors' book; field-marshal the duke of Wellington being one of the first to visit him.

During their residence of more than five years in this country, the duke and his amiable duchess won the affection and respect of all to whom they became known. It was highly gratifying to those who had been by the gallant duke's side throughout his arduous campaigns in Spain to visit him during his honourable exile. Nothing could be more affectionate than his reception of his old English friends, whom he delighted to see around

him. He welcomed them on all occasions as though they had been members of his own family; whilst, on their part, they regarded him with, if possible, more affection and respect than when he was at the head of his victorious army, or on the pinnacle of power as regent of Spain.

Simply attired, he might frequently be seen perambulating our London streets in his quiet observant manner; his unaffected bearing affording no indication that he was the gallant and successful general and patriot, whose banishment from his native country, for a period, was a brilliant addition to his fame, inasmuch as it was caused by his strict adherence to the constitution he had sworn to defend, and by his loyalty to the sovereign.

At length he was recalled to Spain by his sovereign. His rank as field-marshal, and all his honours and titles, were restored to him, and he was nominated by the queen a senator or peer. On this occasion he again displayed those noble qualities for which he has ever been remarkable. In obedience to his sovereign's commands, he lost no time in repairing to Madrid, to take his seat in the chamber of senators. He landed at San Sebastian, and thence travelled post in as private a manner as possible, arriving in the capital, as he wished to do, before its inhabitants were aware that he was once more amongst them. He drove to a friend's house, and remained there in the strictest privacy. It soon oozed out, however, that Espartéro was in Madrid, and, by degrees, the pavement in front of the house where he was, and eventually the whole street in which it stands, became crowded by people of all ranks, anxiously waiting to catch a glimpse of the illustrious man whose virtuous course had so highly endeared him to them. But Espartéro, though repeatedly invited by the expectants to appear in the balcony to receive their affectionate greetings, remained in his apartments. The street was crowded throughout the night and during the following day, in the course of which he was visited privately by the ministers and many personal friends.

Espartéro's great anxiety was to avoid giving a plea for any popular manifestation in his favour, or for any cries against those who had so unjustly persecuted him, lest they should lead to commotions and collisions between the military and the people. His only object was to pay his dutiful respects to his sovereign, to take his place in the chamber of senators, and then retire to his own home at Logrono, in the province of La Rioja in Old Castille. All this was very difficult to manage in the excited state of the population of Madrid. It was at length, however, arranged as follows. A modest private carriage drew up about mid-day before the house where Espartéro was staying. Two ladies and a gentleman, the latter wearing a large cloak, alighted, and entered the house. This did not excite any particular notice on the part of the crowd assembled without; for many visitors of the same class came and went in the course of the morning. In about half an hour the same party, apparently, left the house, entered the carriage, and drove off. The gentleman in the cloak, which was worn so as to shade the greater part of the face—a very usual fashion in Spain—was ESPARTÉRO. He had, as preconcerted, availed himself of the cloak of his friend (who remained

in the house) to get away unrecognised by the people.

According to previous directions, the coachman drove to the royal palace, where the duke was most graciously received by the queen. Thence he proceeded to the palace of the Cortes, where the senate was assembled. When Espartéro entered the house, all the senators rose. The veteran field-marshal Castanos, duke of Baylen, who, at the commencement of the Peninsular war, defeated and captured the French division of 20,000 men under general Dupont, advanced from his place and welcomed Espartéro; whilst, on the other hand, field-marshal Narvaez, Espartéro's rival and former enemy, did the same; and thus he was conducted to his seat between those two commanders. The venerable duke de Baylen—the father of the Spanish army—wore the white uniform which was the costume of his rank at the memorable bygone period when he gained his victory at Baylen, in Andalusia, in 1808. This was noble. It was a grand scene of justice; enacted, nevertheless, with the utmost simplicity, frankly proffered, and as frankly and unaffectedly accepted.

After taking the usual oaths, Espartéro remained during the brief sitting of the house, and then retired, no longer, however, unrecognised by the people. It was spread abroad with lightning velocity that Espartéro had been at the royal palace, and was at the chamber of senators; and his return to his dwelling was through a continued round of acclamations. The windows of the houses were crowded by thousands of both sexes, crying, "*Viva Espartéro!*" the ladies waving their handkerchiefs, and all animated by genuine enthusiasm. As to the pedestrians, they crowded round Espartéro's modest carriage, shouting *vivas*, saying affectionate and respectful words, such as the beautiful Spanish language so touchingly supplies; and when arrived at his friend's house, he was absolutely lifted from the carriage by the people who had so patiently watched for an opportunity of seeing him.

That night he left Madrid in a travelling carriage for Logrono, where he arrived in due time. He continued to reside there, occupying himself in improving his landed property in the vicinity, enjoying the society of a few private friends, carefully abstaining from taking any part whatever in political affairs; and, in short, comporting himself in every respect as a private gentleman who takes a strong interest in the prosperity of the neighbourhood in which he lives; being ever hospitable without ostentation, and kindly and generous to all. The recent convulsions in the Spanish capital have compelled him, however, once more, like another Cincinnatus, to emerge from obscurity; the national voice having called him by acclamation to the conduct of the public affairs.*

* The counsels which Espartéro will tender cannot fail to be wise; but ah! what a boon it were to Spain, so long convulsed and torn by internal dissensions, if the way were paved by him for the concession of religious toleration. During his residence in England he cannot have failed to have been struck, as other foreigners have been, with our loyalty and peaceable character as a nation. These qualities we owe, under God, to the unrestricted circulation amongst us of the Scriptures of truth. To confer upon Spain the same blessings would be the highest act of patriotism.—EDITH.

GALVANOPLASTY.

EVERY one knows the eastern tale of a certain king and his court, who strove to exhaust the power of a complaisant fairy by requiring her to perform feats continually increasing in difficulty. The same may be said to pass now between human industry and electricity. This mysterious agent, this genius of the thunderbolt, whom the orientals, why, I know not, represent as a being of extremely diminutive size, seems to have overpassed the limits of the wildest human requirements, and given far more than the most exacting spirit ever dreamed of demanding. In the Milesian school of Thales, six centuries before our era, it was remarked that a bit of yellow amber, called *electron*, being rubbed, drew light bodies towards it, as the loadstone attracts iron; and from the time of Thales to that of Descartes, numerous theories were promulgated to explain the phenomenon.

Towards the middle of the seventeenth century, Otto of Guericke, the inventor of the pneumatic machine, constructed an electrical apparatus by means of a globe of sulphur, as large as a child's head, mounted on an axis. This globe, in revolving, rubbed against an elastic cushion, and produced electric sparks. From that epoch, philosophers began to question nature through experience. Laying aside the sterile theories which, during more than two thousand years, had enchained and enervated the human mind, they renounced all guessing at the causes of phenomena, and contented themselves with determining what the phenomena really were.

What then were the answers of the electrical agent to the questions of experimental science? Is lightning electricity? Yes, for with artificial electric batteries the same effects on animal life are produced, as by the action of thunder-clouds. Yes, for electricity may be drawn from the sky, the air, and the earth, and employed as an artificial battery. These facts led Franklin to the useful invention of the lightning conductor.

"Eripuit cœlo fulmen, sceptrum que tyrannus."

"He wrested from the skies Heaven's forked brand,
And tore the sceptre from the tyrant's hand."

Or, to give a burlesque paraphrase:—

"He with a kite brought lightning from the sky,
And like a kite he peck'd king George's eye."

The physical philosopher, Charles, has frequently appeased storms by sending to the clouds a kite attached to a metallic thread, which conducts silently downwards the fluid lightning. At the Conservatory of Arts, in Paris, may be seen the varnished stool which supports the metallic string: the wood is scorched by the lightning, which fell over it like a cascade of fire. The physiological effects of electricity are very remarkable. Without speaking of the shock of the Leyden jar, and the sensation caused by sparks, it is certain that all animal organization, as to sensibility, motion, the digestive functions, nutrition, the development of the organs, etc., is under the empire of the electricity of the living being.

When Volta had invented the apparatus which bears the name of the voltaic pile, Aldini, the nephew of Galvani, who was the first to observe

the facts which led Volta to his great discovery, tried its action on animals which had been killed, and on criminals who had been executed. The head of a bull, detached from the body and placed on a table, when excited by the electrical current, opened its eyes, rolled them furiously, inflated its nostrils and shook its ears, as if the animal were alive and prepared for combat. On another table, the plunges of a dead horse were near hurting the spectators, and did break the apparatus placed near the animal.

Afterwards, in England, some physiologists purchased from a criminal condemned to death his own body (strange bargain!) in order to test the animal electric theories, and also with the charitable intention of (if possible) recalling the hanged man to life. The result was terrific. The corpse did not return to life, but a violent and convulsive respiration was produced, the eyes opened, the lips were convulsed, and the face of the assassin, no longer obeying any directing instinct, presented such strange contortions of physiognomy, that one of the spectators fainted with horror, and remained for several days in a species of bewilderment. Fusesi, Rean, Talma, in their mimicry of criminal passions, fell far short of this fearful reality.

Lightning and electricity sometimes set on fire edifices and combustible substances which come in their way; it was, therefore, sought to produce heat by the electric agent. The following was one of the many experiments tried. Solder metallic wires to both extremities of a pile, then bring the other ends of those wires into contact, so that an electrical current may pass from one to the other; then place any, even the most insoluble body, in the midst of the flame surrounding the meeting ends of the wires, and it will speedily become fluid. Refractive metals, minerals otherwise insoluble, earthen, flints, nothing can resist the action of such a furnace.

From the brilliant fugitive light of lightning, and of electric sparks, philosophers were led to seek in electricity a constant and useful light. The preceding arrangement, slightly modified, succeeded to admiration in producing the desired effect. Two pieces of charcoal placed at the point of contact of the soldered wires, become ignited, and shine with a light fully as dazzling as that of the sun. It was attempted to substitute this light for that of gas in shops, public rooms, etc., but it was found unsuitable on account of its overwhelming brilliancy hurting the eyes. It is, however, constantly employed in the service of the huge microscopes usually called solar.

With the voltaic pile a strong motive power has been obtained, able to impel vessels on the water, and to work machinery on land. Voltaic electricity also acts on the magnetic needle. Under its influence the loadstone accomplishes so many wonders that it well deserves its ancient name, "the stone of Hercules."

We may imagine that one day it was said to the electric current, "Don't you think you could travel as a courier from Paris to Marseilles on metallic wires?" Before the word "Marseilles" could well be uttered, the answer had already reached the extremity of France. Ariel, who boasted that he could "put a girdle round the earth in forty minutes," was a laggard when compared with the

electric telegraph. How true were the memorable words of Napoleon I: "The sovereigns who preceded me never understood that in modern times the power of science makes part of the science of power."

Modern physics have established the fact that our globe is one grand electric machine, whose currents direct the magnetic needle, which in its turn serves as a guide to navigators. Chemistry owes to electricity so many compositions and decompositions, so many various molecular actions, so many metals produced for the first time, that, in a word, the most comprehensive chemical theory is that of the electrical properties of the primitive elements of simple or compound bodies. Lightning and electricity draw with them a small quantity of matter, divided into excessively minute portions. With these they *coat*, so to speak, the bodies with which they come in contact. I have seen specimens of coarse marble or compact limestone, forming the pointed summits of some promontories in the bay of Cannes, in Provence, and which, struck repeatedly by lightning, are covered with a layer of silver equal in thickness to a five franc piece. The art of electro-plating in gold and silver, coming every day into more general use, owes its origin to the enlightened observations of M. de Larive, of Geneva.

Galvanoplasty is the latest adaptation of this process. The idea occurred to M. Jacobi, of St. Petersburg, that electricity might be made to bear along the metals, such as copper, silver, or gold, contained in a chemical bath, and to deposit them in great thickness on a sculptured plate, in order to take off a faithful impression, a regular metallic mould. By this process an engraved plate, a medal, a cup of Benvenuto Cellini can be reproduced without any other agent than electricity and time. The great merit of the antique bronzes is the lightness and extreme tenuity of the sculptured metal. These are much more eminently the characteristics of M. Jacobi's metallico-electric sculptures, produced simply by electricity taking up the metal in a chemical bath, and then depositing it in an even layer on the exterior or interior of any mould whatever. It is, in a word, the art of carving, modelling, and moulding by electricity.

Let us enter the workshop of M. Coblentz, in the Rue Charlot in Paris. It is a miserable-looking den, in which a series of dirty buckets, filled with a metallic fluid, subjected to the action of voltaic piles, work silently at their artistic labour, whose elements are borrowed from the science of electricity. The labour consists in filling the buckets with fluid, and in keeping together the plates of copper and zinc which constitute the active part of the process. You turn your eyes from the operations of these unconscious artisans, and in a neighbouring hall, filled with thousands of the objects produced, you will find much to excite your admiration. There are bronzes of astonishing lightness, and in beautiful relief. There are the great state seals for the reign of Napoleon III, reproduced in silver, with all that fineness of artistic engraving which renders the medals and the coins of the present day almost impossible to be counterfeited. There are ornaments carved in alto-relievo with a grace and beauty which would

have seemed fabulous to those who lived before 1850. One has only to bring to M. Coblentz a model in wax, plaster, earthen-ware, armorial bearings, the impress of a seal, or any other object, natural or artificial, and he will return you an exquisite metallic fac-simile. By this same process, flowers, fruits, even anatomical specimens, and objects of natural history, have been (if I may coin a verb) *fac-similized* in metal. At the war-office there has lately been established a workshop for the galvanoplastic reproduction of the copper-plates of the map of France, in order both to reduce the price, and to render additions and corrections possible; for if a defective portion in a galvanoplastic plate be removed, it can easily be produced anew in the metallic bath.

Galvanoplasty is to sculpture and engraving what photography is to painting. To equal a photographic proof with the hand would require years of industry and a consummate knowledge of art. In the same way, to reproduce, otherwise than by galvanoplasty, a statuette or a bas-relief, with the precision and fidelity of the electric agent, would require more than the talent of a first-rate artist.

Let us now turn to the galvanoplasty of nature. This entire globe, with its magnetized atmosphere, its solid continents, its internal nucleus in a state of igneous fusion, and the electrical reactions which are its consequences, is, in fact, a regular electrical machine or pile, having its currents directed from east to west, as indicated by its action on the needle of the mariner's compass, which it directs north and south. These currents circulate incessantly beneath the soil, and traverse all the materials of which the crust of the earth is composed, opening for themselves a path whose direction, and especially the quantity of the fluid, depend on the state and composition of the soil. These electric currents, however weak they may be, draw off at length the metallic portions of the soil, and bear them along as far as the first obstacle they meet, or diminution of strength which they experience. Then they leave them, and there is formed a deposit or vein of metal. This principally takes place in the great fissures or crevices of the soil, filled by heaped-up fragments which have fallen from above, or by lava which has bubbled up from the interior nucleus. These are the veins which the miner explores by means of subterranean galleries, cut through that portion of the soil which has been impregnated with metallic substances, either in their pure and native state, as gold and mercury, or in an oxidized or earthy condition, as iron, copper, zinc, etc.

A beautiful experiment, first tried, I believe, by Mr. Cross, shows this process clearly. You place on a platform a large mass of moist potter's clay, blended with any species of metallic particles of extreme minuteness, and under the earthy form of a metallic oxide. You divide the mass of clay in two, by means of some cutting instrument, such as the blade of a large knife or of a sabre: you then bring together, until they touch, the two portions momentarily separated. Then, by sending an electrical current through the whole mass, there becomes formed in the cleft a metallic deposit, a vein in miniature, revealing to us the secret of nature's treasures laid up in the vast fissures of the primitive and secondary strata.

M. Becquerel has tried with electricity the argentiferous soils of France and of other countries, and the question of the electrical extraction of the precious metal by a voltaic current, which bears it along, is completely solved in a scientific point of view. It remains to be considered under an economical aspect. I remember perfectly to have seen enormous ingots, formed of silver, drawn thus from metalliferous soils. This silver was of extreme purity. Nature has then her interior galvanoplasty, as she has, according to an ancient crystallographer, her subterranean geometry: "*Natura geometriam exercet in visceribus terra.*"

It is not easy to conceive how so impalpable an agent as the electrical current can carry along with it metallic particles, in order to abandon them whenever any obstacle impedes their progress. It is thus that a torrent rolls stones and sand along its channel, in order to deposit them in the plain. In physical experiments may be remarked numerous instances of matter transported by the electric current. Thus, take two vessels half filled with water, and establish a communication between them by a simple wetted electrical wire; one of the vessels will empty its contents into the other by a mysterious process. The saltiness of water even can thus be sent from one vase into another; and you can even cause to pass innocuously through a substance a body which, if not conducted by electricity, would act violently upon it. All the admirable mechanism of nutrition, secretion, digestion in living beings, is founded on electrical movements; and this is so certain, that in animals whose nerves communicating with the stomach have been severed, digestion has been re-established by replacing the missing portions of nerve by a metallic plate or wire, which restores the electrical communication. It has been frequently remarked that the power of the great Creator is most vividly displayed in the smallest objects of nature. For those who know how to observe, what can be a more striking evidence of the might of a Divine directing hand than these grand silent operations, fulfilling their end without effort, without resistance, without shock—producing, developing, nourishing, and preserving the living being? while when man wishes to command the elements by opposing them one against the other, fire, water, wind, steam, hammers and levers—a host of natural and of artificial powers—hiss, growl and roar with a thousand inharmonious voices, ever ready to escape from the empire and the sway of mere human intelligence.

If you plant in the ground, at a certain distance apart, two large metallic plates united by a long metallic wire stretched in the air, this wire is passed through by an almost continuous current. As the currents of the terrestrial globe go from east to west, we might expect that the metallic deposits of nature would principally occur along the chains of mountains or the fissures in the soil running from north to south, and which would naturally impede the passage of the electric currents moving from east to west. Such is in effect the auriferous chain of the Ural, which separates Europe from Asia. It appears very probable that the same holds good with the mountains of California and Australia; but sufficient observations

have not yet been made to establish its certainty.

In the galvanoplasty of nature, we ask whence come these metals—that native gold which the earth contains in considerable masses. *Nuggets* have been found worth more than four thousand pounds. Physically speaking, nothing is produced, and nothing is destroyed. All the great forces of nature, mechanical, physical, chemical, vegetable and animal, which pervade the entire globe, can neither produce nor annihilate a single particle of matter; but these forces can move, unite, and condense the metallic particles disseminated through the soil, and *galvanoplastize* them into a piece of pure gold, or *nugget*.

M. Sage, professor of chemistry at the French mint, has discovered the existence of gold in the soil surrounding Paris. Trees, shrubs, and especially the vine, take up from the soil nutritive juices which become incorporated with their stems and bark. In burning vine branches, all the carbonic particles disappear, and nothing remains but a trifling residuum of ashes. By collecting a sufficient quantity of these ashes, and subjecting them to chemical processes, a small quantity of gold appears. By this process, M. Sage collected sufficient to coin four or five twenty franc pieces. We may remark that, in an utilitarian point of view, this beautiful experiment was by no means successful. The price of fabrication, including everything, amounted to upwards of one hundred francs for each piece. Thus, the expense was five times as great as the value. This recalls a saying current in Spanish America: "The first man who discovers a silver mine loses his fortune; if it be a gold mine, he dies in the poor-house."

Galvanoplasty, born as it were yesterday, amongst the electric sciences, every day augments its theoretical and practical domain. The science considered complete to-day, ceases to be so tomorrow. What would the artists who lived before 1840 have said, if they had been shown a bronze statue obtained without fusion and marked with incredible fineness of detail?

In the above explanation of some of the effects of electricity, we have not even mentioned the aurora borealis and the electric currents of the sun and moon, which have a sensible effect on the magnetic needle. Other phenomena of electricity have also been observed in the planets. Thus our picture is very incomplete, and yet, two centuries ago, the name even of this vast science had no existence! Why is the domain of electricity so vast? Because, through its mechanical, physical, chemical and physiological properties, the electrical agent reigns in reality over all nature.

THE OLD SHOES.

AN INCIDENT IN THE LIFE OF THE EMPRESS JOSEPHINE. THE amiable empress Josephine, after her separation from Napoleon, retired, as is well known, to Malmaison, a country palace, most beautifully situated not far from Paris. Here she lived, though still with the title and rank of an empress, in comparative quiet, solitude, and retirement, until her death, which took place in the year 1814. A short time before her decease she was visited by some

young ladies of her acquaintance, one of whom describes, in a note-book which she has left, the following incident in the life of this pleasing and much-tried lady :—

We had casually expressed to the empress the modest request to be allowed to see her diamonds, which were kept in a concealed vault, and the noble lady, complying most graciously with the humour of two foolish young girls, had a large table brought into the room, upon which her waiting women placed an endless number of cases and caskets of all shapes, so that the table, notwithstanding its size, was entirely covered with them. When the caskets and cases were opened, we were completely dazzled by the splendour, size, radiance, and multitude of the gems which formed the various ornaments. The most remarkable of these, which consisted principally of white diamonds, were ornaments in the shape of pearls, set with perfectly regular pearls of extraordinary size, and of the finest water; the most beautiful precious stones, opals, rubies, sapphires, and emeralds, were entirely surrounded with large diamonds, which, however, passed as mere setting, and would never be taken into account in the valuation of these jewels. Altogether they formed a collection, in my opinion, unparalleled in all Europe; for it was composed of the most costly jewels which were collected in the cities conquered by the French arms. However, it was never necessary for Napoleon to seize these valuables, for the authorities always voluntarily hastened to lay them, as a present, at the feet of the empress. All who have seen these masses of flowers, bouquets, and wreaths of gems, have found in them, so to speak, a realisation of fairy tales; and those who have not seen this magnificent collection can form no conception of its splendour.

The empress seldom wore any but false jewels, which circumstance excited the surprise of most of those who had seen this display of ornaments. She appeared to be much amused at our dumb astonishment, and, when we had examined and fingered the diamonds and brilliants to our hearts' content, she said to us in a friendly tone:—"I only show you my jewels with the view to lessen your taste and pleasure in such costly baubles. When you have once seen such sparkling gems in such abundance, you will never again feel a wish to possess others of smaller value—especially when you consider how unhappy I have been, notwithstanding the possession of a collection of such extraordinary richness. In the commencement of my unusual elevation of rank, I also took pleasure in such trinkets, and received a great many as presents in Italy; but, by degrees, I became so disgusted with them, that I scarcely ever wear them, except when my new rank in the world renders it necessary. Besides, a thousand other different circumstances contribute to spoil my pleasure in such shining but useless objects. I possess, for instance, pendants belonging to ornaments of queen Marie Antoinette, and am no more certain than she whether I shall keep them. Believe me, young ladies, the possession of such splendour does not form true happiness, and is not to be envied. Perhaps you will be surprised when I tell you that it once gave me more genuine pleasure to receive an old pair of shoes as a present,

than the possession of all the diamonds spread out before you now causes me."

We could not help smiling at this remark, for we thought the empress was joking; but she repeated her assurance with such earnestness, that we were very curious to hear the story of the old pair of shoes.

"I can again assure you, young ladies," continued her majesty, "it is literally true, that in my whole life a present never gave me more sincere pleasure than the gift of a pair of old shoes of thick leather, and you will believe me when you have heard my story. I had embarked with my daughter Hortense from Martinique, in the West Indies, on board a vessel, where we were treated with such marked attention that I shall never forget it. When I was separated from my first husband I found myself not very well supplied with ready money, and the expenses of my journey back to France, which was necessary on account of the disturbed state of the place and my own circumstances, having consumed almost the whole of my means, it was with great difficulty that I made the purchases which were absolutely necessary for the voyage. Hortense, who was then a lively, pretty child, was the favourite of the sailors, and, in return for their good-will, liked nothing better than to be with them. In the evening, when I had lain down to sleep, she stole up to the deck and exerted her little powers to the utmost for the entertainment and diversion of all on board. An old boatswain was especially fond of her, and devoted to her every moment he could spare from his daily avocations; his little friend repaid him with the most tender attachment. But, in consequence of the constant jumping about, my daughter's shoes were soon worn into holes, and Hortense, knowing that I had not another pair for her, and fearing that I should no longer allow her to go on deck if I discovered their hopeless condition, and how nearly they were worn out, improperly kept this little misfortune secret, until I saw her one day return to the cabin with her foot bleeding, and inquired in alarm if she had hurt herself. 'No, mamma,' was the answer. 'But your foot is bleeding!' 'Oh it is nothing to signify.' But, on proceeding to examine the wound more closely, I found that her shoes were torn quite to tatters, and that she had lacerated her foot upon a nail.

"We had scarcely accomplished half the voyage, and therefore it would be a long time before I could procure a pair of new shoes for the child. I was troubled at the thought of the sorrow the poor little creature would feel at being obliged to stay with me in my wretched narrow cabin; and then I considered that this would be by no means beneficial to Hortense's health, because she would miss the necessary physical exercise. But just as I was tormenting myself with apprehensions, and allowing my tears to flow freely, our friend, the boatswain, came up, and asked, in his honest rough way, what was the cause of our grief. Hortense answered, sobbing, that now she could no longer come on deck, for her shoes were torn, and mamma could give her no others. 'And is that all?' cried he. 'Oh, that can soon be set to rights. I have an old pair in my chest that I will fetch. You, madam, will cut them out, and then I will sew them together as well as I can. At sea one must

make all kinds of shifts, and not be over-nice. Necessity is the mother of invention! He did not await our answer, but fetched his old shoes, which he brought with the greatest pleasure, and presented them to Hortense, who received them with no less delight. We set zealously to work, and towards evening my daughter was able to go on deck again. I repeat that I have never received a present with more sincere gratitude; and I still reproach myself that I did not make further inquiries respecting the honest seaman, who was only known on board by the name of Jacques. It would have given me heartfelt pleasure to have been of any service to him afterwards, provided I had the power and opportunity."

Hortense, who figures in this little anecdote, was subsequently married to Louis Buonaparte, king of Holland, and was the mother of the present emperor of France, Louis Napoleon.

The necessity in which Josephine was thus placed, at the time of her flight or sudden departure from Martinique, on account of the insurrection which had broken out there, caused her however less pain and care than the harsh suffering and oppression which she was subsequently obliged to endure after her arrival in France; for her husband, general de Beauharnais, who had played a part as one of the early military leaders in the first disturbances of the French revolution, was arrested, imprisoned, and condemned to be guillotined. Josephine herself only narrowly escaped sharing the same fate, in consequence of the death of Robespierre, after which she was released from her imprisonment to become, by a strange combination of circumstances, the wife of Napoleon.

LADY HUNTINGTON'S TWO FRIENDS.

In 1773, Lady Huntington lost two friends with whom she had been long and differently associated. "That indefatigable servant of God, HOWELL HARRIS, fell asleep in Jesus last week," she writes to Romaine. "When he was confined to his bed, and could no longer preach or exhort, he said, 'Blessed be God, my work is done, and I know that I am going to my God and Father, for he hath my heart, yea, my whole heart. Glory be to God, death hath no sting—all is well;' and thus this good man went home to his rest.

"It is impossible to describe the grief which is awakened everywhere by the tidings of his death, he was so beloved as the spiritual father of multitudes. Truly his loss is felt at the college, where many were awakened by his lively ministry. The last time he preached at college, he spoke with a mighty sense of God, eternity, and immortality; and when he came to the application, he addressed himself to the audience in such a tender, earnest, and moving manner, exhorting us to come and be acquainted with the Redeemer, as melted the assembly into tears.

"On the day of his interment, we had some special seasons of divine influence, both upon converted and unconverted. No fewer than twenty thousand persons were assembled, and we had abundance of students in the college, and all the ministers and exhorters, who collected from various parts to pay their last tribute to his remains. We

had three stages erected, and nine sermons addressed to the vast multitudes, hundreds of whom were dissolved in tears. Fifteen clergymen were present, six of whom blew the gospel trumpet with great power and freedom. God poured out his Spirit in a wonderful manner. Many old Christians told me they never had seen so much of the glory of the Lord and the riches of his grace, nor felt so much of the power of the gospel before."

In contrast with the death of Howell Harris stands that of Lord Chesterfield, which occurred a few months afterwards. He had been the early friend and companion of earl Huntington; after whose death, he seems always to have remained on a friendly footing with the countess. Towards the young earl we find him acting as towards an adopted son, a circumstance which lady Huntington is presumed not to have been able to control, and which must have occasioned her no little sorrow. His scepticism and profligacy did not prevent him from frequently attending on the ministrations of Whitefield, whose eloquence he greatly admired, and at lady Huntington's solicitations he often contributed to the cause of Christ.

"Really there is no resisting your ladyship's importunities," he once replied to her: "it would ill become me to censure your enthusiastic admiration of Mr. Whitefield; his eloquence is unrivalled, his zeal inexhaustible, and not to admire both would argue a total absence of taste, and an insensibility not to be coveted by anybody. Your ladyship is a powerful auxiliary to the Methodist cabinet; and I confess, notwithstanding my own private feelings and sentiments, I am infinitely pleased at your zeal in so good a cause. You must have twenty pounds for this new tabernacle, but I must beg my name not to appear."

And it was unto him according to his desires; his name was never enrolled among those who loved their Lord, while his corrupt principles and maxims are handed down to us in a volume of "Letters to his Son," a book which illustrates the well-known yet often-to-be-repeated lesson, that bright talents can make no amends for bad morals. "Death" he declared to be "a leap in the dark," and dark and dreadful did he find the leap to be. As the pains of dissolving nature increased upon him, and human help was vain, his cold and mocking scepticism could offer neither present alleviations nor future hope. "The blackness of darkness, accompanied by every gloomy horror, thickened most awfully around his dying moments," says lady Huntington, who vainly tried to administer the only consolation which could avail.

Far different was the impression which lady Fanny Shirley on her sick-bed made upon the surrounding attendants. Once, as a reigning beauty at court, Chesterfield had addressed to her some of his most famous epigrams; since then, she chose that better part which could never be taken from her. "I am quite at a loss to explain how lady Fanny is enabled to bear such a severity of suffering with so much tranquillity, and so few symptoms of restlessness and murmuring," said her physician to Mr. Venn; "can you account for it, sir?"

"Sir," answered Venn, "that lady happily possesses what you and I ought daily to pray for, the grace of her Lord Jesus Christ, the love of God, and the fellowship of the Holy Ghost."

Varieties.

THE COLOUR AND LUMINOSITY OF THE MEDITERRANEAN.—"The usual tint of the Mediterranean Sea," says Rear-Admiral Smyth, "when undisturbed by accidental or local causes, is a bright and deep blue; but in the Adriatic a green tinge is prevalent; in the Levant basin it borders on purple; while the Euxine often has the dark aspect from which it derives its modern appellation. The clear ultramarine tint is the most general, and has been immemorially noticed, although the diaphanous translucence of the water almost justifies those who assert that it has no colour at all. But notwithstanding the fluid, when undefiled by impurities, seems in small quantities to be perfectly colourless, yet in large masses it assuredly exhibits tints of different intensities. That the sea has actually a fine blue colour at a distance from the land cannot well be contradicted; nor can such colour—however influential the sky is known to be in shifting tints—be considered, as wholly due to reflection from the heavens, since it is often of a deeper hue than that of the sky, both from the interception of solar light by the clouds, and the hues which they themselves take. This is difficult to account for satisfactorily, as no analysis has yet detected a sufficient quantity of colouring matter to tinge so immense a body of water.

"The peculiar occasional luminosity of this sea was particularly noticed by Pliny and many ancients, and, in common with that of other waters, it has long been a subject of scientific inquiry, rational conjecture, and ignorant wonderment; and it is really as difficult of a full solution as it is superbly beautiful in effect. Every assignable cause has been advanced; putrescent fish, electricity, atomic friction, comical vortices, absorption and emission of solar beams, and what not, have all and severally been brought forward, and after various tilts of discussion, laid aside again. But most naturalists now impute this phosphorescent appearance partly to the decomposition of animal substances, and partly to the countless myriads of mollusca, crustacea, infusoria, and other animalcules which can voluntarily emit a luminous brilliance, the chemical nature of which is still unknown."

CROMWELL AND THE LIBERTY OF THE PRESS.—Being informed that Harrington was about to publish his republican Utopia, the "Oceana," Cromwell, then in the fulness of his power, ordered the manuscript to be seized at the printer's and brought to Whitehall. After vain endeavours to obtain its restoration, Harrington, in despair, resolved to apply to the protector's favourite daughter, lady Claypole, who was known to be a friend to literary men, and always ready to intercede for the unfortunate. While he was waiting for her in an ante-room, some of lady Claypole's women passed through the room, followed by her daughter, a little girl three years of age. Harrington stopped the child, and entertained her so amusingly that she remained listening to him until her mother entered. "Madam," said the philosopher, setting down the child, whom he had taken in his arms, "'tis well you are come at this nick of time, or I had certainly stolen this pretty little lady." "Stolen her!" replied the mother, "pray what to do with her?" "Madam," said he, "though her charms assure her a more considerable conquest, yet I must confess it is not love, but revenge, that prompted me to commit this theft." "Ah!" answered the lady again, "what injury have I done you that you should steal my child?" "None at all," replied he, "but that you might be induced to prevail with your father to do me justice, by restoring my child that he has stolen;" and he explained to lady Claypole the cause of his complaint. She immediately promised to procure her book for him, if it contained nothing prejudicial to her father's government. He assured her it was only a kind of political romance, and so far from any treason against her father, that he hoped to be permitted to dedicate it to him: and he promised to present her ladyship with one of the earliest copies. Lady Claypole kept her word, and obtained the restitution of the manuscript, and Harrington dedicated his work to the protector.—*Guisot.*

NUMBER AND EXPENSE OF FOX-HUNTING ESTABLISHMENTS.—We imagined that the introduction of railroads and recent changes in the habits of society had greatly diminished the field-sports so characteristic of the olden time. In this supposition, however, we find ourselves altogether mistaken. According to a work upon this subject, lately published, entitled "Records of the Chase," it appears that at the present time, the number of fox-hunting establishments kept up in England and Wales amounts to ninety-six; there may be a few more, but they are unimportant ones. "To show the increase in 1830, sixty-eight packs of hounds were compounded for; in 1850, eighty-four, according to the returns of assessed taxes. Some of these are maintained with princely magnificence at an expense not under 3500*l.* or 4000*l.* per annum. The average may be estimated at 1400*l.* a-year, which makes a total of 126,000*l.*, circulated through the medium of hounds and horses. That is, however, a trifle compared with the expenditure of those gentlemen who compose the fields, of which it is difficult to form an estimate. The 'Yorkshire Gazette' published an article last year calculating that there were one thousand hunting men in that county, keeping on an average four horses each, at a cost of 50*l.* for each horse per annum. It appears a high estimate, but Yorkshire is a great horse-breeding country, and is particularly celebrated for its sportsmen. Taking one country with another, and averaging the number of horses kept in each for the exclusive purposes of hunting, at one hundred and seventy—which from observation, and the best data I can obtain, I believe to be near the mark—we have fifteen thousand three hundred horses employed in this service. According to the proportion in Yorkshire, this appears to be a very low computation; but it must be remembered that many of the two days a-week packs are not in populous countries, and many of the attendants upon them do not keep more than a single horse. Calculating the keep of each horse at 40*l.* a year—still below the Yorkshire estimate—the aggregate amount will be 6800*l.*, which, added to 1400*l.* for the expenses of the hounds, causes an expenditure of 8200*l.* per annum, as the average allowance for the ninety packs, which is circulated in the agricultural districts. To this may be added a host of contingent expenses, which it would be utterly impossible to compute."

TELEGRAPH IN AMERICA.—The length of the telegraph lines in the United States, according to the exhibition report by Mr. Whitworth, exceeded 15,000 miles in 1852, and has since considerably increased. The most distant points so connected in North America are Quebec and New Orleans, 3000 miles apart. When the contemplated lines, connecting California with the Atlantic, and Newfoundland with the main continent, are completed, San Francisco will be in communication with St. John's, Newfoundland, distant from Galway but five days' passage. It is therefore estimated that intelligence may be conveyed from the Pacific to Europe, and *vice versa*, in about six days. The cost of erecting telegraphs does not average more than 35*l.* a mile throughout the States. The charge for messages from New York to Washington, 270 miles, is 60*c.* (2*s.* 1*d.*) for ten words, and 5*c.* (2*d.*) for every additional word. The charge to the press is 1*c.* a word, under 200 miles, 2*c.* between 200 and 500; and the New York papers, bearing the expense jointly, publish every day as much matter received by telegraph as would fill two columns of a London newspaper. Commercial men use the telegraph to a very great extent, and it is used by all classes. Telegraph wires in towns are almost universally carried along the tops of houses, or on poles erected in the streets, instead of being conveyed in pipes underground. Lines are in some cases erected by private persons for their own particular use. A manufacturer in New York, for instance, has a telegraphic wire carried over the tops of the houses intervening between his office, in one quarter of the city, and his works in another, having obtained, without any trouble, the permission of their various owners.—*Builder.*